

Ship Aug 11

Work Order ID 135232

Wednesday, August 05, 2015 11:21:36 AM

135232

Page 1

Item ID: 647.7611

Revision ID:

Item Name: Lower Deflector

Start Date: 8/05/15

Start Qty: 4.00

4

Required Date: 8/17/15

Req'd Qty: 4.00

4

Reference:

Approvals:

Process Plan

Date:

15.8.5

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

647.7600

N/C

100

100

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank at 16.800"

0.00

0.00

4

DAS
44
9-89

15/08/06

110

110

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB406

DWG REV: N/C

FOLIO REV: N/A

0.00

0.01

4

1

DAS
44
9-89

15/08/06

DAS
20
9-89

15-08-11

2- deburr and break all sharp edges

DQA:

Date: 15/08/02



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed

Date: 15/08/28

Work Order update only

Work Order: <u>135232</u> Part No. <u>647.7611</u> NCR No. <u>15-5284</u>	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☒</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																									
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																																										
Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																																										
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																																										
Large Fab ☐	Composite ☐	Supplier ☐																																																																																											
Date: <u>15-08-10</u>	Step #: <u>110</u>	QTY Effective: <u>1</u>		MRB (QSI042) Approval DAS 9-89 <u>15-08-12</u> Completed By DAS 20-9-89 <u>15-08-10</u> Lead hand / Supervisor Approval Verification <u>08</u> <u>15/08/11</u>																																																																																									
Description Work Order Deviation Origin was not at the right height causing the tool to machine into the part. R.C. Setup.		Disposition scrap + destroy replace 7075-T6 6.00x1.00 H.131357 Correct origin <u>15/08/11</u>		QC / QA Coordinator Approval DAS 9-89 <u>15-08-12</u>																																																																																									
Root Cause <table style="width:100%;"> <tr><td>Environment</td><td>☐</td><td>No Re-verification</td><td>☐</td></tr> <tr><td>Design</td><td>☐</td><td>Operator</td><td>☐</td></tr> <tr><td>Doc/Data</td><td>☒</td><td>Offset/Setup</td><td>☐</td></tr> <tr><td>Equip/Tooling</td><td>☐</td><td>Supplier</td><td>☐</td></tr> <tr><td>Handling/Pre</td><td>☐</td><td>Training</td><td>☐</td></tr> <tr><td>Material</td><td>☐</td><td>Use for Testing</td><td>☐</td></tr> <tr><td>Internal Transport</td><td>☐</td><td>Poor Information</td><td>☐</td></tr> <tr><td>Tribal Knowledge</td><td>☐</td><td>Rushing</td><td>☐</td></tr> <tr><td>LOA</td><td>☐</td><td>Product Improvement</td><td>☐</td></tr> <tr><td>Substation</td><td>☐</td><td>Process Improvement</td><td>☐</td></tr> <tr><td>Past Expiry Date</td><td>☐</td><td>Manufacturing Process</td><td>☐</td></tr> <tr><td>Misidentified</td><td>☐</td><td>Past Due</td><td>☐</td></tr> </table>		Environment	☐	No Re-verification	☐	Design	☐	Operator	☐	Doc/Data	☒	Offset/Setup	☐	Equip/Tooling	☐	Supplier	☐	Handling/Pre	☐	Training	☐	Material	☐	Use for Testing	☐	Internal Transport	☐	Poor Information	☐	Tribal Knowledge	☐	Rushing	☐	LOA	☐	Product Improvement	☐	Substation	☐	Process Improvement	☐	Past Expiry Date	☐	Manufacturing Process	☐	Misidentified	☐	Past Due	☐	FAULT CATEGORY <table style="width:100%;"> <tr> <td>Pressure/Forced ☐</td> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>☒ Off-set</td> <td>Drawing ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>				Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	☒ Off-set	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment	☐	No Re-verification	☐																																																																																										
Design	☐	Operator	☐																																																																																										
Doc/Data	☒	Offset/Setup	☐																																																																																										
Equip/Tooling	☐	Supplier	☐																																																																																										
Handling/Pre	☐	Training	☐																																																																																										
Material	☐	Use for Testing	☐																																																																																										
Internal Transport	☐	Poor Information	☐																																																																																										
Tribal Knowledge	☐	Rushing	☐																																																																																										
LOA	☐	Product Improvement	☐																																																																																										
Substation	☐	Process Improvement	☐																																																																																										
Past Expiry Date	☐	Manufacturing Process	☐																																																																																										
Misidentified	☐	Past Due	☐																																																																																										
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																																										
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																																										
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																																										
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																																										
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																																										
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																																										
Crushing ☐	Countersink ☐	☒ Off-set	Drawing ☐																																																																																										
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																																										
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																																										
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																																										
OTHER :																																																																																													

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 135232

135232

Page 3

Wednesday, August 05, 2015 11:21:37 AM

Item ID: 647.7611 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Lower Deflector
Start Date: 8/05/15 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 8/17/15 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
-----	---	------	--	--	--	--	--	--	--

140

Outsource4 Memo 4.00

Outsource process - Anodize Issue P/O to ATG : 29446

1- Black Anodize as per Dwg 647.7600

2- PRIME AS PER DWG, SEE NOTE #7 (**DISREGARD AFTER ASSEMBLY**)

Certification of Comformity is required

150	Receive & Inspect for Damage & Mat'l Certs	0.00							
-----	--	------	--	--	--	--	--	--	--

150

Packaging Memo 0.00

Packaging

CZ AUG 12 2015 4

4X SP15-08-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 135232

135232

Page 4

Wednesday, August 05, 2015 11:21:37 AM

Item ID: 647.7611 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Lower Deflector

Start Date: 8/05/15 Start Qty: 4.00 *4* Cust Item ID:

Required Date: 8/17/15 Req'd Qty: 4.00 *4* Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155	QC5- Inspect part completeness to step on W/O	0.00							
155						(4)			DAS 38 9-89
QC	Memo	0.00							AUG 20 2015
Quality Control									
180	Identify as per dwg & Stock Location: <u>ME</u>	0.00							
180									
Packaging	Memo	0.00				(4)	JA		AUG 20 2015
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.01							
Quality Control									

JUL 20 15 08 21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Page 1

Wednesday, August 05, 2015 11:21:40 AM

Work Order ID: 135232

135232

Parent Item: 647.7611

647 7611

Parent Item Name: Lower Deflector

Start Date: 8/05/15

Required Date: 8/17/15

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV: A NEW ISSUE 15/08/05 JFS VERIFIED BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M7075T6B6.000X1.000

Purchased

No

100

f

130.5050

1.4

5.894737

DAS

M7075T6B6 000X1 000

44
9-89

15/08/06

7075-T6 BAR 6.000" X 1.000"

Location

Loc Qty

Loc Code

MAT005

130.505

M129891

9

M130014

90

M131357

31.505

5.9' + 1.417'

DAS

20

9-89

15-08-10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

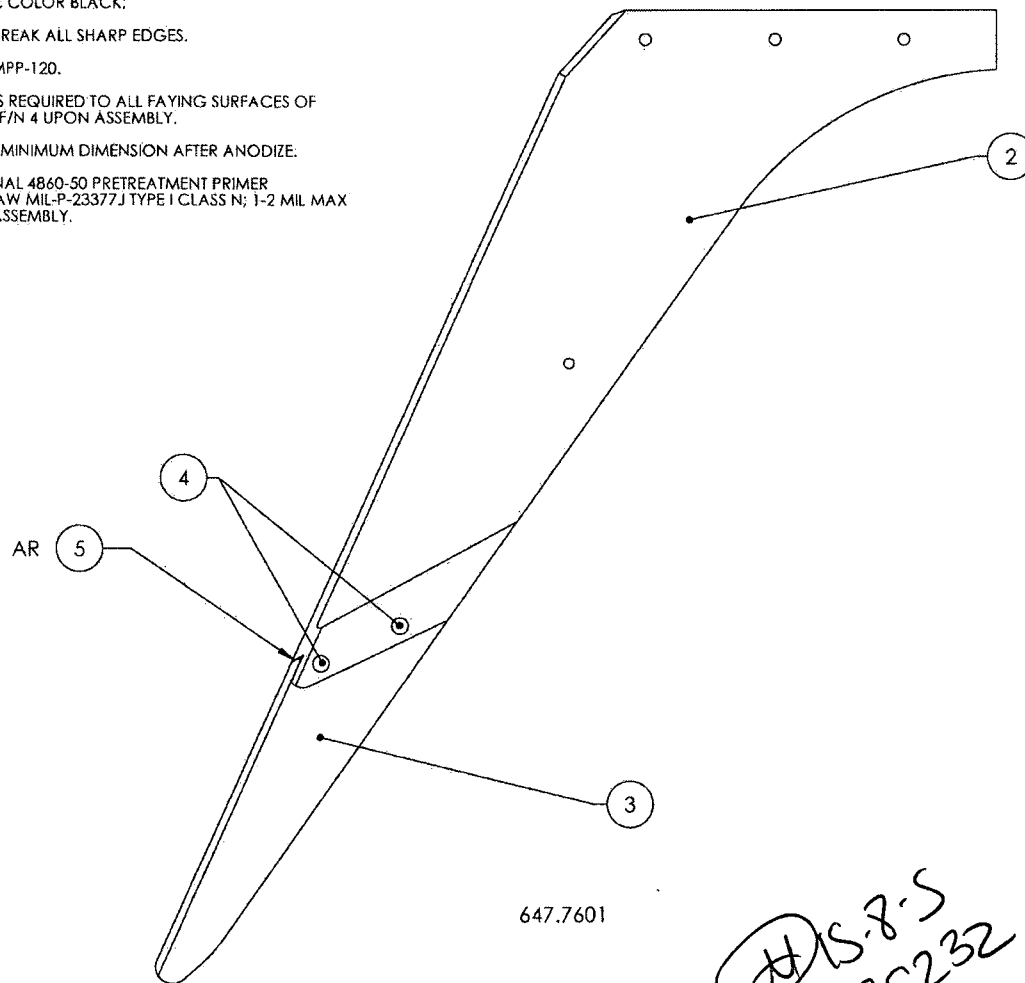
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2, F/N 3 & F/N 4 UPON ASSEMBLY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER ANODIZE.
- 7 FINISH: CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX AFTER ASSEMBLY.

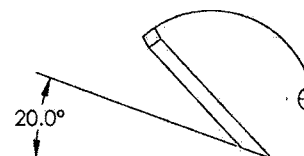


REVISION			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: PPS		N/C
2	INITIAL RELEASE	12-22-09	P. BRAVO

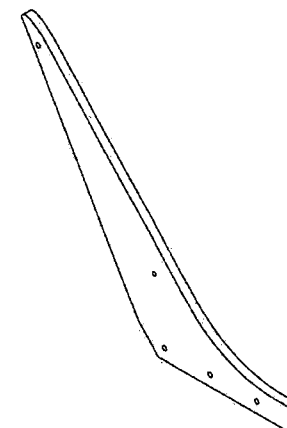
A/R	5	601.2045	RTV, LOCTITE 598		
2	4	601.3122	RIVET	MS20470AD-14	
1	3	647.7612	BREAKAWAY TIP	△	△
1	2	647.7611	LOWER DEFLECTOR	△	△
	1	647.7610	UPPER DEFLECTOR	△	△△
7601	FIND #	647.7601	LOWER DEFLECTOR ASSY		△
QTY	PART #	DESCRIPTION	MAT'L	SPEC.	
PARTS LIST					
NEXT ASSY (S)			APICAL INDUSTRIES		
647.7400			2608 TEMPLE HEIGHTS DR.		
647.7500			OCEANSIDE, CA. 92056-3512 (760)724-5300		
			DEFLECTORS		
			SIZE	CAGE CODE	DWG. NO.
			B	07M126	647.7600
			SCALE NONE		SHEET 1 OF 4

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

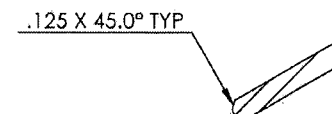
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



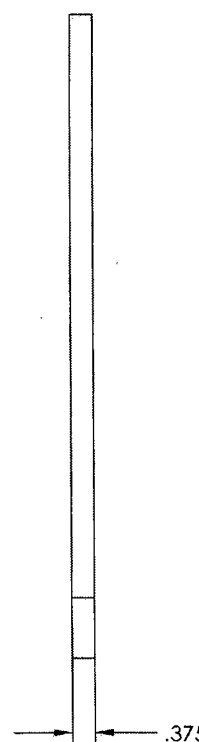
DETAIL B
SCALE 1 : 1



647.7610



SECTION A-A
SCALE 1 : 2



ORIGINAL DATE 11-13-09			
DRAWN BY A. O'HAN			
DRAWING APPROVAL P. BRAYO			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .001 3 PLACE DECIMALS .0005 ANGLES ± .5°			
REV.	CAGE CODE	ENG. NO.	REV.
8	07M26	647.7600	N/C
SCALE NONE			SHEET 2 OF 4

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

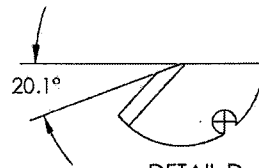
DEFLECTORS

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

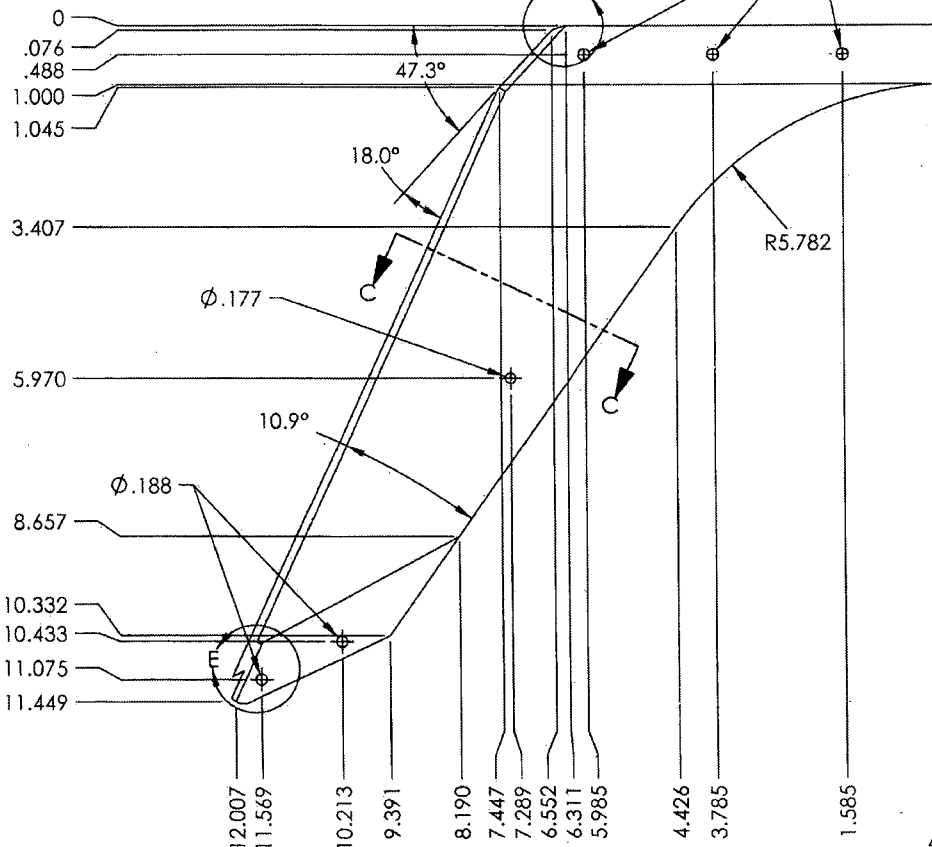
.078 X 45.0° TYP
125° X 45°

SECTION C-C
SCALE 1 : 2

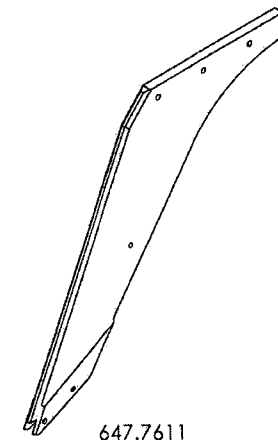


DETAIL D
SCALE 1 : 1

Ø .201



.375



TRUE R.100

.146
.042
0

R.250

DETAIL E
SCALE 1 : 1

TRUE R.100 2PL

.376^{+0.002}
-.000

(.092 2PL)

.560

△ .374 MIN

ORIGINAL DATE
11/22/00
DRAWN BY
A. DYER
CHECKED
P. BRAND
DRAWING APPROVAL
P. BRAND
12/22/00
CONTRACT NO.

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

SEE INSTRUCTIONS
B 07/02/06
SCALE NONE
SHEET 3 OF 4

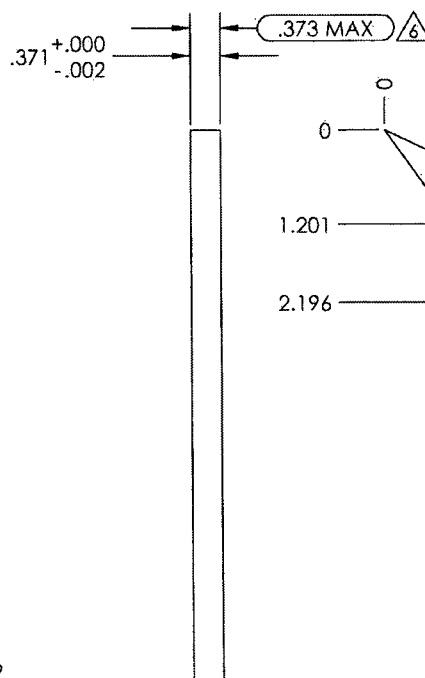
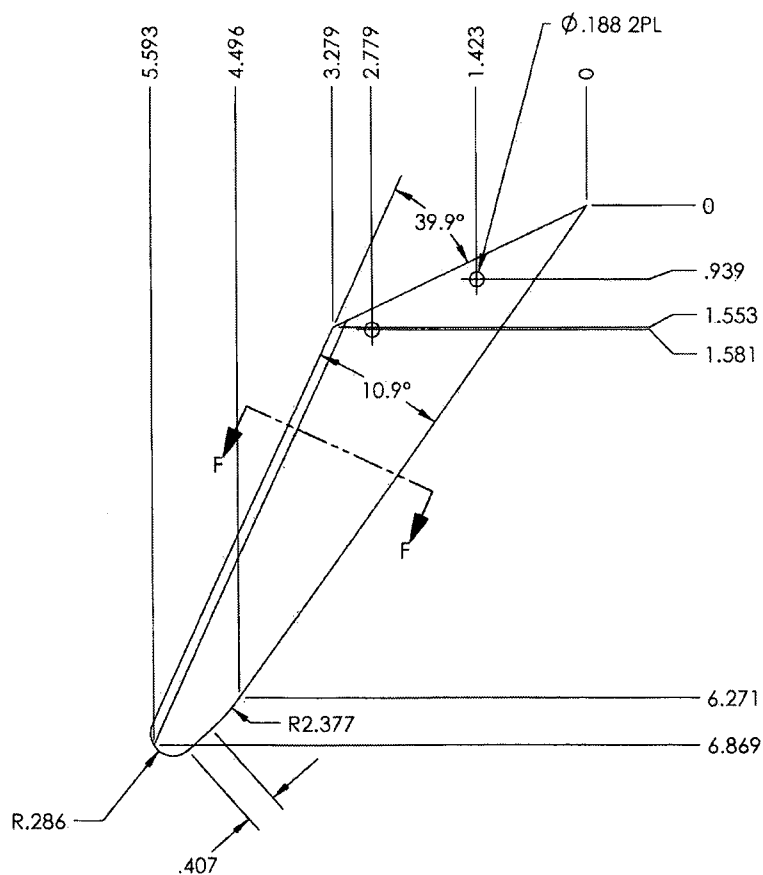
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

.088 X 45.0°

SECTION F-F
SCALE 1:1.5

647.7612



ORIGINAL DATE: 11/25/20 DRAWN BY: A. GUAN CHECKED BY: D. BRAVO DRAWING APPROVAL: 12-22-20 CONTRACT NO.:			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300			
DEFLECTORS			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS .010 2 PLACE DECIMALS .005 1 PLACE DECIMALS .010 ANGLES ± .5°	DES: B CAGE CODE: 07M26	DWG. NO: 647.7600	REV: N/C
SCALE: NONE			SHEET 4 OF 4

DART AEROSPACE LTD		Work Order: 135 232
Description: Deflectors		Part Number: 647-7611
Inspection Dwg: 647-7600 Rev: N/C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.125 X 45°	+/- .010	.125	✓		SLO8	Vern
Ø.177	+0.005/-0.001	.179	✓			
Ø.188	+0.005/-0.001	.188	✓			
Ø.201	+0.005/-0.001	.201	✓			
.488	+/- .010	.488	✓			
1.000	+/- .010	1.004	✓			
5.970	+/- .010	5.971	✓		Height gauge	
10.433	+/- .010	10.434	✓			
11.075	+/- .010	11.075	✓			
11.449	+/- .010	11.449	✓			
11.569	+/- .010	11.568	✓			
10.213	+/- .010	10.212	✓			
7.289	+/- .010	7.289	✓			
5.985	+/- .010	5.985	✓			
3.785	+/- .010	3.785	✓			
1.585	+/- .010	1.585	✓			
.375	+/- .010	.374	✓		SLO2	Mic
.376	+0.002/-0.000	.377	✓		gauge	Pins
.560	+/- .010	.562	✓		SLO2	
.092	+/- .010	.089	✓		SLO8	
R.250	+/- .010	.250	✓		Rad gauge	

Measured by: DAS 20 9-89		Audited by: DAS 14 9-89		Preliminary Approval:	
Date: 15-08-10		Date: 15/08/11		Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63874

Date: 19-Aug-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via
Quantity	Description	
4 ea	Part: 647.7611 LOWER DEFLECTOR MIL-A-8625 TY III CL 2 PRIMER AS PER MIL-PRF-23377J TY I CL N Job: 20150624 PO: PO29446	Rev: N/C 2015-08-20 Line:
8 ea	Part: 647.7810 BRACKET MIL-A-8625 TY III CL 2 PRIMER AS PER MIL-PRF-23377J TY I CL N Job: 20150625 PO: PO29446	Rev: N/C Line:
8 ea	Part: 647.7811 BRACKET MIL-A-8625 TY III CL 2 PRIMER AS PER MIL-PRF-23377J TY I CL N Job: 20150626 PO: PO29446	Rev: N/C Line:
1 lot	Part: D5155-11 CO-PILOT BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 Job: 20150627 PO: PO29446	Rev: B Line:
Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY		



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63874

Date: 19-Aug-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via
Quantity	Description
DATE: <u>12/18/15</u>	
CERTIFIED SIGNATURE: <u><i>R.M.</i></u>	
RECEIVER SIGNATURE: <u><i>Chantal L...</i></u>	
8015-08-20	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO29446**

Purchase Order Date 8/12/2015

PO Print Date 8/14/2015

Page Number 1 of 3

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

PAID
AUG 14 2015

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	135232	647.7611 LOWER DEFLECTOR REV. N/C	8/18/2015 Yes 8/18/2015		4.00	\$18.00	\$72.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N							
Line Total:							\$72.00
2	135246	647.7810 BRACKET REV. N/C	8/18/2015 Yes 8/18/2015		8.00	\$18.00	\$144.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N							
Line Total:							\$144.00
3	135247	647.7811 BRACKET REV. N/C	8/18/2015 Yes 8/18/2015		8.00	\$18.00	\$144.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N							

Note:

8/14/2015